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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,767	08/28/2003	Masaki Takai	241959US0	5868

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EXAMINER

KEYS, ROSALYND ANN

ART UNIT PAPER NUMBER

1621

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/649,767

Applicant(s)

TAKAI ET AL.

Examiner

Rosalynd Keys

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/6/03</u> . | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Status of Claims

1. Claims 1-6 are pending.
Claims 1-6 are rejected.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The information disclosure statement filed November 6, 2003 has been considered.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 is considered indefinite because of the use of the phrase "hereinafter the same" in line 7 on page 66. The Examiner is unclear of what is the same.

6. Claim 3 recites the limitation "a substituent X and its proton adduct X-H" in lines 3 and 4. There is insufficient antecedent basis for this limitation in the claim because claim 1 does not contain a reference to X or its proton adduct X-H.

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Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 3, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Jung (US 3,775,469).

Jung teach preparing unsaturated esters comprising reacting a C4-C6 aliphatic conjugated diolefin with a carboxylic acid in the presence of a palladium catalyst and a ligand comprising an organic phosphine or phosphite (see entire disclosure, in particular column 1, line 67 to column 4, line 28). One specific example of the ligand is triethyl phosphite (see column 3, lines 35-58).

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1 and 3-6 rejected under 35 U.S.C. 102(e) as being anticipated by Chauvin et al. (US 6,525,228 B2).

Chauvin et al. teach reacting a conjugated diene with an active hydrogen containing compound having the general formula (I) in the presence of a transition metal compound and a phosphorus-containing compound (see entire disclosure, in particular column 3, line 62 to column 6, line 31). Specific examples of the active hydrogen

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containing compound include water, methanol and glycol (see column 5, lines 4 and 5):
Specific examples of the phosphorus-containing compound are triethyl phosphite and tricyclohexyl phosphite (see column 6, lines 18-25).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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13. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Chauvin et al. (US 6,525,228 B2).

Chauvin et al. teach the invention as disclosed above. Chauvin et al. suggests that a triisopropyl phosphite can be utilized but does not expressly disclose using triisopropyl phosphite (see entire disclosure, in particular column 5, line 59 to column 6, line 15).

One having ordinary skill in the art would have found it obvious to select a triisopropyl phosphite as the phosphorus-containing compound in view of the teachings of Chauvin et al. that isopropyl is a suitable substituent on the phosphorus-containing compound and that alkyl groups having up to 6 carbon atoms are preferred.

The Applicants showing of unexpected results in the specification is not sufficient to avoid this rejection because a comparison is not being made with the closest phosphorus-containing compound disclosed by Chauvin et al., i.e., triethyl phosphite.

14. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Jung (US 3,775,469).

Jung teaches the invention as disclosed above. Jung do not expressly teach the use triisopropyl phosphite but Jung do suggests its use (see column 3, lines 35-58)

One having ordinary skill in the art would have found it obvious to select a triisopropyl phosphite as the ligand in view of the teachings of Jung. that R' is a hydrocarbonyl radical having 1 to 12 carbon atoms.

The Applicants showing of unexpected results in the specification is not sufficient to avoid this rejection because a comparison is not being made with the closest ligand disclosed by Jung, i.e., triethyl phosphite.

15. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arend et al. (US 4,017,564).

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Arend et al. teach preparing (meth)allyl phosphonic acid dialkyl esters comprising reacting allyl chloride or methallyl chloride with a phosphorus acid trialkyl ester of the formula $P(OR')_3$ wherein R' is a straight-chain or branched, optionally halogen-substituted alkyl radical having up to 4 carbon atoms in the presence of a nickel catalyst (see entire disclosure, in particular column 1, line 66 to column 2, line 35).

Arend et al. differ from the instant claims in that Arend et al. do not teach that the phosphorus acid trialkyl ester may also be used as a catalyst in the reaction. However, the amounts utilized by Arend et al. are sufficient for its use as a catalyst. Thus, although it is not disclosed as being useful as a catalyst, its use as a catalyst is implied.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

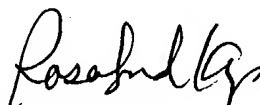
Trost et al. (US 4,051,157) teach allylic alkylation comprising reacting a compound having an allylic carbon-oxygen bond with a nucleophile in the presence of a palladium with an excess of a phosphine (see entire disclosure).

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosalynd Keys whose telephone number is 571-272-0639. The examiner can normally be reached on M, R and F 3:00-8:00 pm and T-W 5:30-10:30 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rosalyn Keys
Primary Examiner
Art Unit 1621

December 11, 2004